

What is claimed is:

1. A resin composition for a mold used in forming micropatterns, which comprises:
 - 5 (A) 40 to 90 parts by weight of an active energy curable urethane-based oligomer having a reactive group selected from the group consisting of (meth)acrylate, vinyl ether, arylether, and a combination thereof;
 - 10 (B) 10 to 60 parts by weight of a monomer reactive with the urethane-based oligomer, having a reactive group selected from the group consisting of (meth)acrylate, vinyl ether, arylether, and a combination thereof;
 - 15 (C) 0.01 to 200 parts by weight of a silicone or fluorine containing compound, based on 100 parts of the sum of the components (A) and (B); and
 - (D) 0.1 to 10 parts by weight of a photoinitiator, based on 100 parts of the sum of the components (A), (B) and (C).
2. The composition according to claim 1, wherein the active energy curable urethane-based oligomer is selected from the group consisting of linear aliphatic, cycloaliphatic and aromatic urethane-based oligomers having at least two reactive groups, and a mixture thereof.
- 25 3. The composition according to claim 1, which further comprises at least one reactive oligomer selected from the group consisting of a (meth)acrylated polyester, (meth)acrylated polyether, (meth)acrylated epoxy, (meth)acrylated polycarbonate, (meth)acrylated polybutadiene, and a mixture thereof, as a constituent of Component A.
- 30 4. The composition according to claim 1, wherein the (meth)acrylate used as

- Component B is selected from the group consisting of isobornyl acrylate, 1,6-hexanediol acrylate, triethyleneglycol di(meth)acrylate, trimethylol propane triacrylate, tetraethyleneglycol di(meth)acrylate, 1,3-butanediol diacrylate, 1,4-butanediol diacrylate, diethyleneglycol diacrylate, neopentylglycol diacrylate, 5 neopentylglycol di(meth)acrylate, polyethyleneglycol di(meth)acrylate, pentaerythritol triacrylate, dipentaerythritol (hydroxy) pentaacrylate, alkoxyLATED tetraacrylate, octadecyl acrylate, isodecyl acrylate, lauryl acrylate, stearyl acrylate, behenyl acrylate, styrenic monomer, and a mixture thereof.
- 10 5. The composition according to claim 1, wherein the vinyl ether used as Component B is selected from the group consisting of cyclohexyl vinyl ether, 2-ethylhexyl vinyl ether, dodecyl vinyl ether, 1,4-butanediol divinyl ether, 1,4-hexanediol divinyl ether, diethylene glycol divinyl ether, ethyleneglycol butyl vinyl ether, ethyleneglycol divinyl ether, triethyleneglycol methylvinyl ether, 15 triethyleneglycol divinyl ether, trimethylol propane trivinyl ether, 1,4-cyclohexane dimethanol divinyl ether, and a mixture thereof.
- 20 6. The composition according to claim 1, wherein the aryl ether used as Component B is selected from the group consisting of aryl propyl ether, aryl butyl ether, pentaerythritol triary ether, and a mixture thereof.
7. The composition according to claim 1, wherein the silicone or fluorine-containing compound is at least one selected from:
- 25 (i) a silicone-containing reactive compound selected from the group consisting of a silicone-containing vinyl derivative, silicone-containing (meth)acrylate, (meth)acryloxy-containing organosiloxane, silicone polyacrylate, and a mixture thereof;
- (ii) a fluorine-containing reactive compound selected from the group 30 consisting of a fluoroalkyl-containing vinyl derivative, fluoroalkyl-containing (meth)acrylate, fluorine polyacrylate, and a mixture

thereof;

- (iii) a silicone or fluorine containing resin, or a mixture thereof; and
- (iv) a silicone or fluorine containing surfactant or oil, or a mixture thereof.

5 8. The composition according to claim 1, wherein the photoinitiator is at least one of a free radical initiator selected from the group consisting of benzyl ketals, benzoin ethers, acetophenone derivatives, ketoxime ethers, benzophenone, benzo and thioxantone compounds, and mixtures thereof, and a cationic initiator selected from the group consisting of onium salts, ferrocenium salts, diazonium salts, and mixtures thereof.
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9. A method for fabricating an organic mold, which comprises coating or casting the resin composition recited in claim 1 on a pattern face of a mastermold, placing a support on the resin layer, irradiating the resulting laminate with an active energy ray to preliminarily cure the resin composition, lifting off the organic mold having a reverse pattern face to that of the mastermold and integrally formed with the support from the mastermold, and completely curing the organic mold.
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10. The method according to claim 9, which further comprises adhering a soft or rigid backing having a curved or flat face to the bottom face of the organic mold.
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11. A method for fabricating an organic mold, which comprises coating or casting a resin composition recited in claim 1 on a pattern face of a mastermold, irradiating the resin layer with an active energy ray to preliminarily cure it, pouring a UV- or heat-curable resin composition onto the cured resin layer as a backbone, heating or irradiating the resultant to completely cure the resin and the backbone layers, lifting off the organic mold having a reverse pattern face to that of the mastermold and integrally formed with the backbone layer from the mastermold, and completely curing the organic mold.
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